

REMARKS

Entry of the above amendments is respectfully requested. Claims 1, 9, 17 and 22 have been amended. Claim 25 has been cancelled. Claims 1-6, 8-14, 16-24, 26 and 27 are pending. In view of the above amendments and the below remarks, reconsideration is believed to be in order and the same is respectfully requested. Please note the amendments merely further clarify the scope of the invention such that no further search is required.

The present invention is directed to non-thermal or cold ablation of a food product such as cheese, i.e., a non-living sample. Through the use of a UV laser operated at high power and a high pulse rate, efficient processing of non-sensitive samples such as cheese can be accomplished. Being able to cut the food product at significant depths quickly, and using a technique in which cut accuracy is not particularly critical (tolerances are large), is only possible when operating the laser at high power and pulse rate. Ultimately, in the present invention, several parameters are tuned to provide efficient processing of a food product via cold ablation whereby the atomic bond energy of the food product is overcome.

Turning to the Action, claims 1-3, 9-14 and 16-21 were rejected under 35 USC §102(b) as being anticipated by *L'Esperance, Jr.*, US Pat. No. 5,312,320. Claim 4 was rejected under 35 USC §103 as being unpatentable over *L'Esperance, Jr.*, in view of *Morris et al.*, US Pat. No. 6,472,295. Claims 5, 6 and 8 were rejected under 35 USC §103 as being unpatentable over *L'Esperance, Jr.*, in view of *Oikawa et al.* in Japanese Pat. No. 10-249,571. Claims 22-24 and 27 were rejected under 35 USC §103 as being unpatentable over *L'Esperance, Jr.*, in view of *Lin*, US Pat. No. 5,520,679. Claims 25 and 26 were rejected under 35 USC §103 as being unpatentable over *L'Esperance, Jr.*, in view of US Pat. Pub. No. 2001/0037105 to *Lin*. In view of the present amendments to independent claims 1, 17 and 22, and the below remarks, these rejections are believed to be overcome and an indication of the same is respectfully requested.

L'Esperance, Jr. is directed to an apparatus for performing ophthalmological surgery. The technique disclosed therein is a highly precise technique for making cuts in the cornea of the eye to effect vision correction. Given that the technique is used on living tissue in an extremely sensitive part of the body, precise control over the laser is critical. In particular, to minimize the chance of damage to the eye, laser pulse rate and power must be precisely controlled.

The goals of the apparatus of the present invention, as clarified with the present amendments, are entirely different. High speed and large cut depths are important for effectuating efficient processing of non-living samples such as food. In this regard, operating the UV laser at an appropriate wavelength to overcome the atomic bonding energy associated with the sample is provided, with different samples (i.e., types of food) often requiring different wavelengths of operation. In addition, operating the laser with sufficient power to provide sufficiently deep cuts is necessary.

To the contrary, laser eye surgery techniques, such as that disclosed in *L'Esperance, Jr.*, are so unlike the present invention different that the disclosures found therein fundamentally teach away from the present invention. Importantly, the *L'Esperance, Jr.* technique could not be used to process a food product such as cheese because operating the laser at such low power, as it must for eye surgery, would not cause any appreciable ablation of the cheese and would be essentially worthless if used to perform the claimed invention.

To emphasize that the present invention is directed to processing food products only, and to otherwise clarify the invention, applicant has amended each of the independent claims, 1, 9, 17 and 22, to define the laser as being operated at a significantly greater average power than that used by the systems of the cited art, i.e., greater than 10 watts. The amendment reflects an amount needed to process a food product by cold photoablation. As this was previously claimed, no further search is necessary.

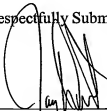
As noted by the Examiner in citing the *Lin* publication, a typical average power when performing refractive eye surgery is about 4-5 watts. Such techniques cannot operate in the claimed range without the risk of damaging the eye, and as such, the disclosures originating in the refractive eye surgery field cannot anticipate the present claims. Moreover, because such techniques have such disparate goals and performance characteristics (tolerances, etc.), such references fundamentally teach away from the present technique and thus cannot render the present claims, as amended, obvious. In sum, in view of the present amendments to the claims which emphasize the laser parameters associated with performing cold ablation to achieve processing efficiency, including deep cuts at high speeds, and with relaxed tolerances, on non-sensitive food products such as cheese, the present rejections are believed to be overcome. An indication to this effect is respectfully requested.

CONCLUSION

In view of the present amendments and remarks, each of the pending claims 1-6, 8-14, 16-24, 26 and 27 is believed to be in compliance with 35 §§ 102, 103 and 112, and thereby in condition for allowance. An indication in this regard is respectfully requested. Should the Examiner have any questions or wish to discuss this case further in an effort to facilitate resolution, he is please asked to contact the undersigned at the below number.

Authorization is given to charge Deposit Account 50-1170 in the amount of \$60 for a one-month extension of time (small entity). No other fees are believed to be due. However, applicant asks that any additional fees associated with this or any other communication, or any credit for overpayment, be directed to Deposit Account number 50-1170. Should the Examiner have any questions or wish to discuss this case further, the Examiner is invited to contact the undersigned at the below number.

Respectfully Submitted by,


A handwritten signature in black ink, appearing to read 'Jay G. Durst', is written over a horizontal line.

Jay G. Durst

Reg. No. 41,723

Dated: August 25, 2008

Customer Account No. 23598

BOYLE FREDRICKSON S.C.

840 N. Plankinton Ave.

Milwaukee, WI 53203

Tel. 414-225-9755

Facsimile 414-225-9753

Email: docketing@boylefred.com